# UNITED STATES PATENT AND TRADEMARK OFFICE

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| 09/902,274 | 07/11/2001 | James X. Kong | 80168-0237 | 8343 |

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| 32658 | 7590 | 04/08/2004 | CORRIELUS, JEAN M |

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*10*

Please find below and/or attached an Office communication concerning this application or proceeding.

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1) ☒ Responsive to communication(s) filed on _21 January 2004_.
2a) ☐ This action is **FINAL**.    2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
   closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4) ☒ Claim(s) _1-24_ is/are pending in the application.
   4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) _1-24_ is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a) ☐ All  b) ☐ Some * c) ☐ None of:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. _____.
    3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage
       application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
   Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

## DETAILED ACTION

1.      This office action is in response to the amendment filed on January 21, 2004, in

which claims 1-24 are presented for further examination.

### *Claim Rejections - 35 USC § 112*

2.      The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly
> claiming the subject matter which the applicant regards as his invention.

3.      Claims 1-21 are rejected under 35 U.S.C. 112, second paragraph, as

being indefinite for failing to particularly point out and distinctly claim the subject

matter which applicant regards as the invention. Claims 1, 14 and 22 recite:

(A)     "using a code to create a condition filter". It is unclear as to what kind of

code the applicant is referring to. Applicant must be more specific to which code

one having ordinary skill would use to create a condition filter.

(B)     "sending the standard query language statement to a database". It is not

clear as to how and why the standard query language statement is been sent to

a database when the standard query language is used as a platform to help

creating a condition filter. Would it be instead the precompiled query language

statement that is sent to a database?. Applicant is advised to amend the claims

to specify which code uses to create a condition and also to clarify the use of

sending to a database the precompiled query language statement in order to

enable one having ordinary skill in the art apprise, make and use the invention.

4.      Claim 1 recites the limitation "the standard query" in line 4.  There is insufficient antecedent basis for this limitation in the claim.

5.      Claim 9 recites the limitation "sending the SQL statement to the database" in line 9.  There is insufficient antecedent basis for this limitation in the claim.

### Claim Objections

6.      The claims 1-24 are objected to because they include abbreviation words or reference characters which are not enclosed within parentheses.  For instance JDBC should be in parentheses follow the description the abbreviation word

Reference characters or abbreviation words corresponding to elements recited in the detailed description of the drawings and used in conjunction with the recitation of the same element or group of elements in the claims should be enclosed within parentheses so as to avoid confusion with other numbers or characters which may appear in the claims.  See MPEP § 608.01(m).

### Claim Rejections - 35 U.S.C. § 103

7.      The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or
> described as set forth in section 102 of this title, if the differences between the subject
> matter sought to be patented and the prior art are such that the subject matter as a whole
> would have been obvious at the time the invention was made to a person having ordinary
> skill in the art to which said subject matter pertains. Patentability shall not be negatived
> by the manner in which the invention was made.

8.      Claims 1-4, 9-17 and 22-24 as best understood by the examiner are rejected under 35

U.S.C. 103(a) as being unpatentable over Leung et al (hereinafter "Leung") US Patent no.

6,339,768 in view of Berenson et al., US Patent no. 6,356,887 (hereinafter "Berenson").

As to claim 1, Leung discloses the claimed "using a code to create a condition filter in a

standard query language statement, the condition filter defining properties to be

satisfied by a result of the query, and the condition filter using an object to execute a

recompiled query language statement" as a program code contains the host language

in which input to a pre-compile, wherein the generated compiled set of runtime

structures called an application plan from the compiled SQL statement and wherein the

program code received as input specify only the desired data, but not how to retrieve

the data (col.5, lines 6-35). Leung does not explicitly discloses the use wherein the

recompiled query language statement is executed multiple times without being

recompiled. However, Leung discloses the used of precompiling a program source

code, wherein the source code is inputted to a precompile and outputted a modified

source module and a database request module, so the modified source code contains

host language calls to DB2 which the precompile source code is inserted in place of

SQL statements. Leung also discloses a compile and link-edit that uses the modified source module to produce a load module, while an optimize and bind operation uses the database request module to produce a compiled set of runtime structure for the application plan (col.5, lines 10-25). On the other hand, Berenson discloses an analogous system that transforms a database query into a parameterized basic query form by replacing any constant values in the query with parameters. In particular, Berenson discloses the claimed "wherein the recompiled query language statement is executed multiple times without being recompiled" as a means for executing a query language statement multiple times without having to be recompiled (col.1, lines 22-38). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the teachings of the cited references because the auto-parameterization process disclosed by Berenson would allow Leung's system the enhanced capability of allowing multiple query language statement to be executed thereby avoiding multiple recompilation of a query statement while not incurring the overhead of stored procedures. Leung also does not explicitly disclose the use of "sending the standard query language statement to a database". However, Leung states that the SQL interface allows users to manipulate the data, wherein each operator operates on either one or two tables and produces a new table and wherein the SQL statement contains a search condition, wherein the search condition is processed according to the specification in the SELECT clause.

Berenson, on the order hand, discloses the claimed "sending the standard query language statement to a database" by combining the SELECT-FROM-WHERE of standard query language as a basic structure for query statements with the set valued function of the host language using the SQL query to retrieve information from the database (col.5, lines 20-38). It would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the teachings of the cited references because the auto-parameterization process disclosed by Berenson would allow Leung's system the enhanced capability of allowing multiple query language statement to be executed thereby avoiding multiple recompilation of a query statement while not incurring the overhead of stored procedures.

As to claims 2, 10 and 13, Leung discloses the claimed "wherein data values in the condition filter are replaced with question mark" and a corresponding data value list is created" (col.6, lines 45-67).

As to claim 3, 11, Leung discloses the claimed "wherein the code includes a tree data structure" wherein the query statement (code) is a graph model (col.9, lines 4-15).

As to claim 4, Leung and Berenson disclose substantially the invention as claimed. However, Leung does not explicitly disclose the claimed "wherein the code includes

LIKE, AND, and OR operators". On other hand, Berenson discloses the claimed

"wherein the code includes LIKE, AND, and OR operators" (col.9, line 58-col.12, line

65). It would have been obvious to one having ordinary skill in the art at the time the

invention was made to combine the teachings of the cited references because the auto-

parameterization process disclosed by Berenson would allow Leung's system the

enhanced capability of allowing multiple query language statement to be executed

thereby avoiding multiple recompilation of a query statement while not incurring the

overhead of stored procedures.

As to claim 9, Leung discloses the claimed "using an application programming interface

to create a standard query language statement, the condition filter defining properties to

be satisfied by a result of the query (SQL) WHERE clause statement in a SQL

statement and to pass the SQL WHERE clause statement to a persistent object

framework (POF)" as a program code contains the host language in which input to a

pre-compile, wherein the generated compiled set of runtime structures called an

application plan from the compiled SQL statement and wherein the program code

received as input specify only the desired data, but not how to retrieve the data (col.5,

lines 6-35). Leung does not explicitly disclose the use of "sending the SQL statement to

a database, wherein the SQL WHERE clause statement includes a condition filter uses

a Prepared statement object, and wherein the SQL statement is executed multiple times without being recompiled". However, Leung states that the SQL interface allows users to manipulate the data, wherein each operator operates on either one or two tables and produces a new table and wherein the SQL statement contains a search condition, wherein the search condition is processed according to the specification in the SELECT clause. On the other hand, Berenson discloses an analogous system that transforms a database query into a parameterized basic query form by replacing any constant values in the query with parameters. In particular, Berenson discloses the claimed "sending the standard query language statement to a database" by combining the SELECT-FROM-WHERE of standard query language as a basic structure for query statements with the set valued function of the host language using the SQL query to retrieve information from the database (col.5, lines 20-38) and "wherein the SQL WHERE clause statement includes a condition filter uses a Prepared statement object, and wherein the SQL statement is executed multiple times without being recompiled" as a means for executing a query language statement multiple times without having to be recompiled (col.1, lines 22-38). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the teachings of the cited references because the auto-parameterization process disclosed by Berenson would allow Leung's system the enhanced capability of allowing multiple query language

statement to be executed thereby avoiding multiple recompilation of a query statement while not incurring the overhead of stored procedures.

As to claim 12, discloses the claimed "creating a condition filter for a standard query language (SQL) WHERE clause statement" as a program code contains the host language in which input to a pre-compile, wherein the generated compiled set of runtime structures called an application plan from the compiled SQL statement and wherein the program code received as input specify only the desired data, but not how to retrieve the data (col.5, lines 6-35). Leung does not explicitly disclose the use of "passing the condition filter to a persistent object framework, wherein the SQL WHERE clause statement uses a Prepared statement object to request a query". However, Leung states that the SQL interface allows users to manipulate the data, wherein each operator operates on either one or two tables and produces a new table and wherein the SQL statement contains a search condition, wherein the search condition is processed according to the specification in the SELECT clause.

On the other hand, Berenson discloses an analogous system that transforms a database query into a parameterized basic query form by replacing any constant values in the query with parameters. In particular, Berenson discloses the claimed passing the condition filter to a persistent object framework, wherein the SQL WHERE clause statement uses a Prepared statement object to request a query"(col.5, lines 20-38) and "wherein the SQL WHERE clause statement uses a Prepared statement object, and wherein the query is executed multiple times without being recompiled" as a means for executing a query language statement multiple times without having to be recompiled (col.1, lines 22-38). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the teachings of the cited references because the auto-parameterization process disclosed by Berenson would allow Leung's system the enhanced capability of allowing multiple query language statement to be executed thereby avoiding multiple recompilation of a query statement while not incurring the overhead of stored procedures.

As to claims 14-17 and 22-24, the limitations of claims 14-17 and 22-24 have been noted in the rejection claims 1-4. In addition, Leung discloses the claimed 'making a connection with a database" as a database request module (DBRM) comprises of SQL statement from program codes (col.5, lines 17-24).

9.      Claims 5-8 and 18-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Leung et al (hereinafter "Leung") in view of Berenson et al., (hereinafter "Berenson"). as applied to claims 1-4, 9-17 and 22-24 above, and further in view of Thai US Patent no. 5,666,528.

As to claims 5-8 and 18-21, Leung and Berenson disclose substantially the invention as claimed. In addition Berenson discloses the claimed "wherein the code includes one of IS NULL and IS NOT NULL functions" (col.10, lines 10-67). Neither Leung nor Berenson discloses the claimed "wherein the code include some of UPPER, LOWER, and INITCAP functions" and "wherein the code comprises TO_DATE function". On the other hand, Thai, discloses the claimed "wherein the code includes one of IS NULL and IS NOT NULL functions" as a filter out all the record that does not meet the search criteria (col.8, line 30-col.9, line 30); "wherein the code include some of UPPER, LOWER, and INITCAP functions" as a means for converting the text string to uppercase and lower case (col.9, lines 56-67) and "wherein the code comprises TO_DATE function" (col.9, lines 5-67). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the teachings of the cited references because the filter conditions disclosed by Thai would allow Leung and Berenson combined's system the enhanced capability of achieving better integration by making codes easier to write and read, thereby improving its versatility and functionality.

## *Conclusion*

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Jean M. Corrielus whose telephone number is (703) 306-

3035. The examiner can normally be reached on Monday - Friday (12:00 pm - 7:30 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, John E Breene can be reached on (703) 305-9790. The fax phone number for

the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the

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have questions on access to the Private PAIR system, contact the Electronic Business

Center (EBC) at 866-217-9197 (toll-free).

Jean M. Corrielus

Patent Examiner

April 7, 2004